

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1. (Currently amended) A heat transport system comprising:
a condenser bank comprising one or more condensers;
a primary evaporator comprising a primary liquid port, a secondary fluid port, and a primary vapor port;

a liquid return line coupled to the primary liquid port and connecting the primary evaporator to the condenser bank;

a secondary fluid line coupled to the secondary fluid port of the primary evaporator;
a fluid reservoir in fluid communication with the secondary fluid line;

an auxiliary evaporator disposed adjacent the fluid reservoir, the auxiliary evaporator comprising:

a vapor output port;

a fluid port in fluid communication with the fluid reservoir; and

a vapor line connecting the condenser bank to the vapor output port of the auxiliary evaporator and to the primary vapor port of the primary evaporator.

Claim 2. (Previously presented) The heat transport system of claim 1, further comprising a back pressure regulator disposed in the vapor line to prevent migration of vapor into the condenser bank.

Claim 3. (Previously presented) The heat transport system of claim 1, further comprising a capillary flow regulator connected to a liquid output line of a condenser of the condenser bank.

Claim 4. (Previously presented) The heat transport system of claim 1, wherein the primary wick includes a core,

the primary liquid port feeds into the core through a liquid bayonet,
the secondary wick provides a flow path between the secondary liquid port and the core,
the primary vapor port is coupled to receive vapor exiting the primary wick, and
the secondary vapor port is coupled to the core.

Claims 5 and 6. (Cancelled)

Claim 7. (Currently Amended) An evaporator system for use in a heat transport system, the evaporator system comprising:

an evaporator including:

a primary wick defining a core;
a vapor channel configured to receive vapor exiting the primary wick;
a liquid channel within the core that is configured to receive liquid from a source external to the evaporator, at least a portion of the liquid channel is void of a wick;
a secondary wick within the core providing a flow path within the liquid channel of the core;
a secondary liquid channel within the secondary wick; and
a two phase channel between the secondary wick and the primary wick;
a first port coupled to the secondary liquid channel of the evaporator; and
a second port coupled to the two phase channel of the evaporator.

Claim 8. (Currently amended) The evaporator system of claim 7 wherein the secondary wick is configured to separate liquid and vapor within the core.

Claim 9. (Previously presented) The heat transport system of claim 1 wherein the secondary fluid port is not in fluid communication with the primary liquid port.

Claim 10. (Previously presented) The heat transport system of claim 1 further comprising:

a second primary evaporator, and

a second secondary fluid line coupled to the secondary fluid port of the second primary evaporator,

wherein the liquid return line is coupled to the primary liquid port of the second primary evaporator to connect the second primary evaporator to the condenser bank and the vapor line connects the condenser bank to the vapor output port of the auxiliary evaporator and to the primary vapor port of the second primary evaporator.

Claim 11. (Previously presented) The heat transport system of claim 10 wherein the second primary evaporator is connected in parallel with the primary evaporator relative to the condenser bank.

Claim 12. (Previously presented) A heat transport system comprising:
a primary loop including:

a primary evaporator including primary wick defining a core and a vapor channel, and

a condenser coupled with the primary evaporator by a liquid line in fluid communication with the core and a vapor line in fluid communication with the vapor channel; and

a secondary loop configured to purge at least one of vapor and non-condensable gas bubbles from the core of the primary evaporator, the secondary loop including:

a secondary fluid line in fluid communication with the primary evaporator,

a secondary evaporator coupled with the condenser through the vapor line, and

a reservoir in fluid communication with the secondary evaporator and coupled to the primary evaporator by the secondary fluid line.

Claim 13. (Previously presented) The heat transport system of claim 12 wherein the reservoir is cold biased.

Claim 14. (Previously presented) The heat transport system of claim 12 wherein primary evaporator includes a bayonet that couples fluid from the fluid line to the core.

Claim 15. (Previously presented) The heat transport system of claim 12 wherein the primary evaporator includes a secondary wick within the core that separates at least one of vapor and non-condensable gas bubbles from liquid in the core.

Claim 16. (Previously presented) The heat transport system of claim 15 wherein the secondary fluid line provides a flow path for at least one of vapor and non-condensable gas bubbles from the core of the primary evaporator to the reservoir.

Claim 17. (Previously presented) The heat transport system of claim 15 wherein the secondary wick is configured to permit adjustment of capillary pumping within the core of the primary evaporator based on heat conducted across the secondary wick.

Claim 18. (Previously presented) The heat transport system of claim 12 wherein the secondary fluid line is segregated from the liquid line.

Claim 19. (Currently amended) The heat transport system of claim 12 wherein the primary evaporator includes:

a primary liquid port in fluid communication with the liquid line,
a primary vapor port in fluid ~~communicaiton~~ communication with the vapor line, and

a fluid port in fluid communication with the secondary fluid line.

Claim 20. (Previously presented) The heat transport system of claim 19 wherein the primary evaporator includes a secondary liquid port in fluid communication with the reservoir.

Claim 21. (Previously presented) The heat transport system of claim 19 wherein the fluid port is a secondary vapor port.

Claim 22. (Previously presented) The heat transport system of claim 12 wherein the reservoir is coupled to the primary evaporator by a secondary liquid line.

Claim 23. (Previously presented) The heat transport system of claim 12 wherein the primary loop includes a back pressure regulator in the vapor line.

Claim 24. (Previously presented) The heat transport system of claim 23 wherein the back pressure regulator includes a wick structure coupled to the condenser.

Claim 25. (Previously presented) The heat transport system of claim 23 wherein the back pressure regulator is configured to prevent vapor from flowing into the condenser until a pressure head is developed in the vapor line that exceeds a capillary back pressure in the wick structure.

Claim 26. (Previously presented) The heat transport system of claim 12 further comprising a second primary loop including:

a primary evaporator including a primary wick defining a core and a vapor channel,
a condenser coupled with the primary evaporator by a second liquid line in fluid
communication with the core and a second vapor line in fluid communication with the vapor

channel, the second liquid line at least partially overlapping with the liquid line and the second vapor line at least partially overlapping with the vapor line.

Claim 27. (Previously presented) The heat transport system of claim 26 further comprising a back pressure regulator in the portion of the vapor line that overlaps with the second vapor line, the back pressure regulator configured to load share heat applied to the primary evaporators.

Claim 28. (Previously presented) The heat transport system of claim 26 further comprising a second secondary loop configured to purge at least one of vapor and non-condensable gas bubbles from the core of the primary evaporator of the second primary loop, the second secondary loop including a second secondary fluid line coupling the primary evaporator of the second secondary loop with the reservoir.

Claim 29. (New) The evaporator system of claim 7 wherein the vapor channel is outside of the core.

Claim 30. (New) The evaporator system of claim 7 further comprising a third port coupled to the vapor channel.

Claim 31. (New) The evaporator system of claim 30 further comprising a fourth port coupled to the liquid channel.

Claim 32. (New) The evaporator system of claim 31 wherein the fourth port is coupled to the liquid channel by a bayonet.

Claim 33. (New) The evaporator system of claim 7 wherein the liquid channel is configured to receive liquid from a source external to the evaporator.

Claim 34. (New) A heat transport system comprising:

- a means for condensing fluid;
- a means for evaporating fluid including:
 - a first means for receiving liquid,
 - a second means for receiving liquid, and
 - a first means for outputting vapor;
- a first means for fluidly connecting the evaporating fluid means to the condensing fluid means, the first connecting means being coupled to the first liquid receiving means;
- a means for storing excess fluid in the heat transport system;
- a second means for fluidly connecting the second liquid receiving means to the means for storing excess fluid;
- an auxiliary means for evaporating fluid adjacent the means for storing excess fluid, the auxiliary means comprising:
 - a second means for outputting vapor;
 - a means for fluidly communicating with the means for storing excess fluid; and
 - a means for fluidly connecting the condensing fluid means to the first outputting vapor means and to the second outputting vapor means.

Claim 35. (New) An evaporator system for use in a heat transport system, the evaporator system comprising:

- a means for evaporating fluid including:
 - a primary means for wicking defining a core;
 - a means for receiving vapor exiting the primary wicking means;
 - a primary means for receiving liquid, the primary liquid receiving means within the core;
 - a secondary means for wicking within the core providing a flow path within the core;

a secondary means for receiving liquid, the secondary liquid receiving means within the secondary wicking means; and

a means for receiving two phase fluid between the secondary wicking means and the primary wicking means;

a first port means for receiving liquid from the secondary liquid receiving means; and a second port means for receiving two phase fluid from the two phase fluid receiving means.

Claim 36. (New) A heat transport system comprising:

a primary loop means including:

a primary evaporating means including primary wick defining a core and a vapor channel, and

a condensing means coupled with the primary evaporating means by a liquid line in fluid communication with the core and a vapor line in fluid communication with the vapor channel; and

a secondary loop means for purging at least one of vapor and non-condensable gas bubbles from the core of the primary evaporating means, the secondary loop means including:

a secondary fluid means for fluid communication with the primary evaporating means,

a secondary evaporating means coupled with the condensing means through the vapor line, and

a means for storing fluid, the means for storing fluid being in fluid communication with the secondary evaporating means and coupled to the primary evaporating means by the secondary fluid means.